Conclusion: We concluded that some facilities should to be trained on the use of incinerators, protective gear, and the post exposure prophylaxis as a biosafety measure in the implementation of infection prevention and control at the health care places of work.

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Economic evaluation of a nosocomial infection control program in Bogota, Colombia: Analysis from a health provider viewpoint

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Background: Nosocomial infections (NI) are preventable events with a high impact on hospital costs and mortality. Our aim was to evaluate from the perspective of the health provider the cost-effectiveness of a program designed to reduce NI.

Methods: From the medical records database of the institution, we selected a random sample of patients who acquired infections while hospitalized during the year 2008. We also randomly selected patients who were admitted the same year but did not acquire infections while hospitalized. These non-infected patients were matched to NI patients by age and diagnosis. Costs were calculated from the provider's perspective and converted from Colombian pesos to US dollars using the average exchange rate of 2008. With data from the hospital budget office, and based on the costs generated by the infectious disease committee in 2008, we calculated costs attributable to NI as well as benefits attained by infections prevented. Benefits were calculated according to sensitivity analyses based on the maximum and minimum reduction of NI reported in the literature.

Results: Hospitalization costs were evaluated in 187 patients with NI and 276 non-infected patients. Median total hospitalization cost was US$6,329 (95% CI US$5,527-7,934) in NI patients, while in non-infected patients this median cost was US$1,207 (95% CI US$974-1,495) (Difference between medians US$5,122). Patients with NI had longer hospital stays (median 21 days, 95% CI 18-24 days) than non-infected patients (median 5 days, 95% CI 5-6 days). Mortality was also markedly higher in the NI group than in the non-infected group (31.6% versus 5.1%). The total cost of implementing a NI control program in 2008 was US$ 101,891. For an 11% reduction of total NI incidence there is a yearly cost reduction of US$407,388, and a benefit:cost ratio of 4:1. If the committee is able to reach the maximum reported reduction of NI (55%), 398 NI will be avoided each year, with an annual cost reduction of US$2,036,941 and a benefit:cost ratio of 20:1.

Conclusion: NI are costly and preventable events. A NI control program is not only cost-effective from the provider's point of view, but also it can simultaneously improve key institutional quality measures.

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Efficacy and safety in environmental decontamination with fogging with *superoxidized water* XTERIDES® (SW) against *Bacillus atrophaeus* spores (BA) and Methicillin resistant staphylococcus epidermidis (MRSE)

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Background: Cleaning and disinfecting environmental surfaces in patient care are important in infection control programs. Housekeepers often fail in the cleaning of surfaces: not exceed 50%. Persistent gram+ and – resistant bacteria in environmental surfaces contribute to the transmission of healthcare-associated pathogens. SW are emerging as new technologies of disinfection and environmental decontamination compared to other methods and fogs: hydrogen peroxide (steams and gas); UV radiation. Those disadvantages: expensive, staff dedicated these tasks, cannot be used when rooms are occupied. XTERIDES®, was approved as sporicidal, bactericidal, virucidal against all MDR health care associated pathogens. not toxic for skin, eyes and mucous, 1 year stability. Efficiency of the XTERIDES® fogging in cystoscopy Urology service artificially contaminated selected sites with MRSE and BA w/load of 108 cfu, in a level III Hospital.

Methods: March, 2011.Clean cistoscopy room (49 m3) were contaminated with MRSE and BA spores with a load of 108 cfu in a 9 sites w/9cm in diameter area: leg supports, pads, examination table, work table, shelves, floor, instrumental table, sink, edge of the sink. Samples taken by duplicate of initial inoculums before fogging the room using SW (lot 307, 265 ppm of active chloride pH 6.5) with a Dyna-Fog® Hurricane, model 2739. 3.8 L. of capacity, with particles of 5μ. 3 min fog, 2 min waits. Total 9min fogging in 15 min. Samples taken by duplicated: 30 min and 19 hrs after fogging, using a home/made the D/E Neutralizing Agar to avoid the carryover of the product, during 10 days 35,5°C.

Results: A decrease of more than 6 log ufc of initial concentration for both the vegetative bacteria and spores are found. No regrowth in closed room after 19 hrs. of application.

Conclusion: Results are very encouraging. To our knowledge this is the 1st worldwide study showing the efficacy of fogging disinfection in high risk Hospital area. 1 Efficiency. 2 environmental and personnel friendly, can be performed in presence of persons and/or patients; feasibility and very low Costs (1l = 16 Euros). SW may be an useful compounds for terminal and emergency disinfection against health care associate, opportunistic multidrug resistant bacteria (MDR) and spores.

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